Abstract

PDLC Notice App will simplify the way one can view, uploading as well as downloading notices. In this app/system, students can view all the notices of the department irrespective of the year they are studying in. The co-ordinator will generate the notice offline. Then that notice will be forwarded to the appointed person who will upload the notice or admin. The person who is uploading the notice can view the notice and delete the notice if there are any changes to be done. The uploading, viewing and if any changes, deleting the notice will happen on the web application which will be built for the respective purpose. Then the students can view the notice from the mobile android app. Students can save the save the notice in their respective phones for later use. The notices will be displayed in the format where the latest notice will be displayed first.

Keywords

Notice, downloading, uploading, viewing, android app, co-ordinator, web application, document, student, admin.

Introduction

1.1 Background

Previously all the notices were put on the notice board. Due to this, students were enable to save the information displayed on the notice board. If they want to see the notice board. If they want to see the notice at name or anywhere else, they are enable to do so. Now since the internet boom, all the notices are displayed on the college site. But the problem is, the, the pdf’s or notices are displayed in an unorganized manner. Due to this it becomes a tedious job for the students to search the website for their respective department notices.

PDLC Notice App will help the students in viewing and downloading their notices on their notices on their mobile. Also, the notices will be thoroughly segregated according to the departments available in the college. Because of this they will only see their department notices and all general notices which they can download on phone.

Aim

To create a college notice app.

1.2 Objectives

* Create a notice application.
* To display the notices according to the department of the student.
* Make application efficient and accurate for students.
* To increase my knowledge base.

1.4 Purpose

* PDLC Notice app will completely digitalize the way notices are displayed and viewed by the students.
* Previously, students had to scour the notice boards to find what all notices are put up for their department or for their specific class.
* Due to all this, there was chaos everywhere.
* Most of the times, students had to depend on their follow classmates for information.
* Not only that, students got confused as they didn’t had the soft copy of the notice as they were completely dependent on their peers for information
* Referring the notice at later date and at their convenience was a big issue.
* PDLC Notice app will get rid off the offline system and make the process of uploading and viewing the notices in a digital format in a more dynamic way.

1.4 Scope

The main and the most important function of this app is to shift the uploading and viewing as well as downloading the notices from the offline world to the digital realm. By taking advantage of the internet as well as cell phones, students can easily view and download the notices according to their respective classes and also according to their respective departments. Notices are displayed in a systematic manner which is fetched from an API. The user experience is also enhanced. The teacher/co-ordinator will have access to a web application in which he/she can upload, view and delete the notices. PDLC Notice app will resolve all the limitations which are prevailing in the current system like chaotic management, visibility issues, segregation of notices, etc. This app through some tweaks here and there can also be used at organizational level to inform the employees of ay particular event, deadlines, etc.

Limitations:

* IOS users can’t access the app as the app is a native to android users.
* Continuous internet access is required.
* The notice document should have a limited size so as to preserve server space.
* Users can face delay I information transfer if the server is not of high quality.
* App will not run on android version below 4.4 i.e Kitkat.

Assumption:

* Admin/co-ordinator should have access to a working PC.
* Student should have access to a phone.
* Both, the teacher as well as the student should have internet available so that they can access the web application as well as the android app respectively.
* Students should have phones with android version 4.4 and above.
* Teacher should have access to the document that is to be uploaded.

Applicability:

* The web application and the app can be used in various other sectors with some minor changes.
* This application can be used in industrial sector where the manager can easily issue a message which can be viewed by the employees.
* It can also be used in educational sector where the principal can call a meeting at specified time and date by forwarding or uploading the document containing the information. The staff can then access the document from their app,

Survey of Technologies

2.1 Existing System

The most popular Operating System for mobiles at the moment is Android, which was launched by Google way back in 2008. Android is an open source operating system written in Linux and specially designed for smartphones and tablets. Android was developed by Android Inc. which was bought by Google in 2005. The first Android based smartphone was HTC Dream which was launched in 2008. As the OS is opens source, it allows the developers to play with the code allowing them to modify the code as per their needs. Google has launched different versions of Android such as Cupcake, Donut, Éclair, Froyo, GingerBread, HoneyComb, etc. With each iteration, the computational and the software capability also increased simultaneously. Many upgrades and features also got introduced with each iteration of the Android OS.

2.2 List of Technologies

* HTML : Hypertext Markup Language (HTML) is the standard markup languages for documents designed to be displayed in the web browser. It can be assisted by technologies such as Cascading Style Sheet and scripting languages such as javascript. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. They are the building blocks of the HTML pages. With HTML constructs, and other objects such as interactive forms may be embedded into the rendered page. It provides means to create structured documents by denoting structural semantics for text such as heading, paragraphs, links, quotes etc.
* CSS : Cascading Style Sheet is a style sheet language used for describing the presentation of a document written in a markup language like HTML It is designed to enable the separation of presentation and content including layout, colours and fonts. The separation can improve content accessibility provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant css in a separate .css file and reduce complexity and repetition in the structural content.
* PHP : Hypertext Preprocessor (PHP) is a general purpose programming language originally designed for web development. It was originally created by Rasmus Lerdorf in 1994. PHP code can be executed with a command line interface (CLI), embedded into HTML code, or used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in a web server or as generated HTML code or binary image data. It can be used for many programming tasks outside of the web context, such as standalone graphical applications and robotic drone control. PHP can be used to build simple as well as complex web applications.
* Java : Java programming language was originally developed by Sun Microsystems which was initiated by James Gosling and released in 1995 as core component of Sun Miocrosystems Java platform. In java, everything is object oriented. It can be easily extended since it is based on the object model. Java code is not complied into platform specific machines , rather platform specific byte code. This byte code is distributed over the web and interpreted by the Virtual Machine., It is easy to learn. Being architecture – neutral and having no implementation dependent aspects of the specification make Java portable. It also makes an effort to eliminate errors prone situations by emphasizing mainly on compile time error checking that can run smoothly.. It is designed for the distributed environment of the internet. It is also designed to adapt to an evolving environment. Java is used to make native android applications.

List of available technologies

Html: **Hypertext Markup Language** (**HTML**) is the standard [markup language](https://en.wikipedia.org/wiki/Markup_language) for documents designed to be displayed in a [web browser](https://en.wikipedia.org/wiki/Web_browser). It can be assisted by technologies such as [Cascading Style Sheets](https://en.wikipedia.org/wiki/Cascading_Style_Sheets) (CSS) and [scripting languages](https://en.wikipedia.org/wiki/Scripting_language) such as [JavaScript](https://en.wikipedia.org/wiki/JavaScript).

[Web browsers](https://en.wikipedia.org/wiki/Web_browser) receive HTML documents from a [web server](https://en.wikipedia.org/wiki/Web_server) or from local storage and [render](https://en.wikipedia.org/wiki/Browser_engine) the documents into multimedia web pages. HTML describes the structure of a web page [semantically](https://en.wikipedia.org/wiki/Semantic_Web) and originally included cues for the appearance of the document.

[HTML elements](https://en.wikipedia.org/wiki/HTML_element) are the building blocks of HTML pages. With HTML constructs, [images](https://en.wikipedia.org/wiki/HTML_element#Images_and_objects) and other objects such as [interactive forms](https://en.wikipedia.org/wiki/Fieldset) may be embedded into the rendered page. HTML provides a means to create [structured documents](https://en.wikipedia.org/wiki/Structured_document) by denoting structural [semantics](https://en.wikipedia.org/wiki/Semantics) for text such as headings, paragraphs, lists, [links](https://en.wikipedia.org/wiki/Hyperlink), quotes and other items. HTML elements are delineated by *tags*, written using [angle brackets](https://en.wikipedia.org/wiki/Bracket#Angle_brackets). Tags such as <**img** /> and <**input** /> directly introduce content into the page. Other tags such as <**p**> surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a [scripting language](https://en.wikipedia.org/wiki/Scripting_language) such as [JavaScript](https://en.wikipedia.org/wiki/JavaScript), which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The [World Wide Web Consortium](https://en.wikipedia.org/wiki/World_Wide_Web_Consortium) (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.[[2]](https://en.wikipedia.org/wiki/HTML#cite_note-deprecated-2)

Css: **Cascading Style Sheets** (**CSS**) is a [style sheet language](https://en.wikipedia.org/wiki/Style_sheet_language) used for describing the [presentation](https://en.wikipedia.org/wiki/Presentation_semantics) of a document written in a [markup language](https://en.wikipedia.org/wiki/Markup_language) like [HTML](https://en.wikipedia.org/wiki/HTML).[[1]](https://en.wikipedia.org/wiki/Cascading_Style_Sheets#cite_note-1) CSS is a cornerstone technology of the [World Wide Web](https://en.wikipedia.org/wiki/World_Wide_Web), alongside HTML and [JavaScript](https://en.wikipedia.org/wiki/JavaScript).[[2]](https://en.wikipedia.org/wiki/Cascading_Style_Sheets#cite_note-2)

The name *cascading* comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable.

CSS is designed to enable the separation of presentation and content, including [layout](https://en.wikipedia.org/wiki/Page_layout), [colors](https://en.wikipedia.org/wiki/Color), and [fonts](https://en.wikipedia.org/wiki/Typeface).[[3]](https://en.wikipedia.org/wiki/Cascading_Style_Sheets#cite_note-3) This separation can improve content [accessibility](https://en.wikipedia.org/wiki/Accessibility), provide more flexibility and control in the specification of presentation characteristics, enable multiple [web pages](https://en.wikipedia.org/wiki/Web_page) to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or [screen reader](https://en.wikipedia.org/wiki/Screen_reader)), and on [Braille-based](https://en.wikipedia.org/wiki/Braille_display) tactile devices. CSS also has rules for alternate formatting if the content is accessed on a [mobile device](https://en.wikipedia.org/wiki/Mobile_device).[[4]](https://en.wikipedia.org/wiki/Cascading_Style_Sheets#cite_note-4)

Php: **PHP: Hypertext Preprocessor** (or simply **PHP**) is a [general-purpose programming language](https://en.wikipedia.org/wiki/General-purpose_programming_language) originally designed for [web development](https://en.wikipedia.org/wiki/Web_development). It was originally created by [Rasmus Lerdorf](https://en.wikipedia.org/wiki/Rasmus_Lerdorf) in 1994;[[6]](https://en.wikipedia.org/wiki/PHP#cite_note-History_of_PHP-6) the PHP [reference implementation](https://en.wikipedia.org/wiki/Reference_implementation) is now produced by The PHP Group.[[7]](https://en.wikipedia.org/wiki/PHP#cite_note-about_PHP-7) PHP originally stood for *Personal Home Page*,[[6]](https://en.wikipedia.org/wiki/PHP#cite_note-History_of_PHP-6) but it now stands for the [recursive initialism](https://en.wikipedia.org/wiki/Recursive_initialism) *PHP: Hypertext Preprocessor*.[[8]](https://en.wikipedia.org/wiki/PHP#cite_note-8)

PHP code may be executed with a [command line interface](https://en.wikipedia.org/wiki/Command-line_interface) (CLI), embedded into [HTML](https://en.wikipedia.org/wiki/HTML) code, or used in combination with various [web template systems](https://en.wikipedia.org/wiki/Web_template_system), web [content management systems](https://en.wikipedia.org/wiki/Content_management_system), and [web frameworks](https://en.wikipedia.org/wiki/Web_framework). PHP code is usually processed by a PHP [interpreter](https://en.wikipedia.org/wiki/Interpreter_(computing)) implemented as a [module](https://en.wikipedia.org/wiki/Plugin_(computing)) in a web server or as a [Common Gateway Interface](https://en.wikipedia.org/wiki/Common_Gateway_Interface) (CGI) executable. The web server outputs the results of the interpreted and executed PHP code, which may be any type of data, such as generated HTML code or binary image data. PHP can be used for many programming tasks outside of the web context, such as [standalone](https://en.wikipedia.org/wiki/Computer_software) [graphical applications](https://en.wikipedia.org/wiki/Graphical_user_interface)[[9]](https://en.wikipedia.org/wiki/PHP#cite_note-9) and robotic [drone](https://en.wikipedia.org/wiki/Unmanned_aerial_vehicle) control.[[10]](https://en.wikipedia.org/wiki/PHP#cite_note-10)

Java: **Java** is a [general-purpose](https://en.wikipedia.org/wiki/General-purpose_language) [programming language](https://en.wikipedia.org/wiki/Programming_language) that is [class-based](https://en.wikipedia.org/wiki/Class-based_programming), [object-oriented](https://en.wikipedia.org/wiki/Object-oriented_programming)[[15]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-FOOTNOTEDECODER1-15) (although not a pure object-oriented language, as it contains primitive types[[16]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-16)), and designed to have as few implementation [dependencies](https://en.wikipedia.org/wiki/Dependency_(computer_science)) as possible. It is intended to let [application developers](https://en.wikipedia.org/wiki/Application_developer) *write once, run anywhere* (WORA),[[17]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-17)meaning that [compiled](https://en.wikipedia.org/wiki/Compiler) Java code can run on all platforms that support Java without the need for recompilation.[[18]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-design_goals-18) Java applications are typically compiled to [bytecode](https://en.wikipedia.org/wiki/Java_bytecode) that can run on any [Java virtual machine](https://en.wikipedia.org/wiki/Java_virtual_machine) (JVM) regardless of the underlying [computer architecture](https://en.wikipedia.org/wiki/Computer_architecture). The [syntax](https://en.wikipedia.org/wiki/Syntax_(programming_languages)) of Java is similar to [C](https://en.wikipedia.org/wiki/C_(programming_language)) and [C++](https://en.wikipedia.org/wiki/C%2B%2B), but it has fewer [low-level](https://en.wikipedia.org/wiki/Low-level_programming_language) facilities than either of them.

The latest versions are [Java 12](https://en.wikipedia.org/wiki/Java_version_history), released in March 2019, and Java 11, a currently supported [long-term support](https://en.wikipedia.org/wiki/Long-term_support) (LTS) version, released on September 25, 2018; [Oracle](https://en.wikipedia.org/wiki/Oracle_Corporation) released for the [legacy](https://en.wikipedia.org/wiki/Legacy_system) Java 8 LTS the last free public update in January 2019 for commercial use, while it will otherwise still support Java 8 with public updates for personal use up to at least December 2020. Oracle (and others) highly recommend that you uninstall older versions of Java,[[22]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-22)

Android: **Android** is a [mobile operating system](https://en.wikipedia.org/wiki/Mobile_operating_system) developed by [Google](https://en.wikipedia.org/wiki/Google). It is based on a modified version of the [Linux kernel](https://en.wikipedia.org/wiki/Linux_kernel) and other [open source](https://en.wikipedia.org/wiki/Open-source_software) software, and is designed primarily for [touchscreen](https://en.wikipedia.org/wiki/Touchscreen) mobile devices such as [smartphones](https://en.wikipedia.org/wiki/Smartphone) and [tablets](https://en.wikipedia.org/wiki/Tablet_computer). In addition, Google has developed [Android TV](https://en.wikipedia.org/wiki/Android_TV) for televisions, [Android Auto](https://en.wikipedia.org/wiki/Android_Auto) for cars, and [Wear OS](https://en.wikipedia.org/wiki/Wear_OS) for wrist watches, each with a specialized user interface. Variants of Android are also used on [game consoles](https://en.wikipedia.org/wiki/Video_game_console), [digital cameras](https://en.wikipedia.org/wiki/Digital_camera), [PCs](https://en.wikipedia.org/wiki/Personal_computer) and other electronics.

Applications ("[apps](https://en.wikipedia.org/wiki/Mobile_app)"), which extend the functionality of devices, are written using the [Android software development](https://en.wikipedia.org/wiki/Android_software_development) kit (SDK)[[78]](https://en.wikipedia.org/wiki/Android_(operating_system)#cite_note-78) and, often, the [Java](https://en.wikipedia.org/wiki/Java_(programming_language)) programming language.[[79]](https://en.wikipedia.org/wiki/Android_(operating_system)#cite_note-79) Java may be combined with [C](https://en.wikipedia.org/wiki/C_(programming_language))/[C++](https://en.wikipedia.org/wiki/C%2B%2B),[[80]](https://en.wikipedia.org/wiki/Android_(operating_system)#cite_note-80) together with a choice of non-default [runtimes](https://en.wikipedia.org/wiki/Runtime_library) that allow better C++ support.[[81]](https://en.wikipedia.org/wiki/Android_(operating_system)#cite_note-81) The [Go](https://en.wikipedia.org/wiki/Go_(programming_language)) programming language is also supported, although with a limited set of [application programming interfaces](https://en.wikipedia.org/wiki/Application_programming_interface)(API).[[82]](https://en.wikipedia.org/wiki/Android_(operating_system)#cite_note-82) In May 2017, Google announced support for Android app development in the [Kotlin programming language](https://en.wikipedia.org/wiki/Kotlin_(programming_language)).[[83]](https://en.wikipedia.org/wiki/Android_(operating_system)#cite_note-83)[[84]](https://en.wikipedia.org/wiki/Android_(operating_system)#cite_note-84)

SQl: **SQL** ([/ˌɛsˌkjuːˈɛl/](https://en.wikipedia.org/wiki/Help:IPA/English) ([About this sound](https://en.wikipedia.org/wiki/File:En-us-SQL.ogg)[listen](https://upload.wikimedia.org/wikipedia/commons/5/5f/En-us-SQL.ogg)) *S-Q-L*,[[4]](https://en.wikipedia.org/wiki/SQL#cite_note-learningSQL-4) [/ˈsiːkwəl/](https://en.wikipedia.org/wiki/Help:IPA/English) "sequel"; **Structured Query Language**)[[5]](https://en.wikipedia.org/wiki/SQL#cite_note-Britannica-5)[[6]](https://en.wikipedia.org/wiki/SQL#cite_note-oed-US-6)[[7]](https://en.wikipedia.org/wiki/SQL#cite_note-IBM-SQL-7)[[8]](https://en.wikipedia.org/wiki/SQL#cite_note-MS-SQL-def-8) is a [domain-specific language](https://en.wikipedia.org/wiki/Domain-specific_language) used in programming and designed for managing data held in a [relational database management system](https://en.wikipedia.org/wiki/Relational_database_management_system) (RDBMS), or for stream processing in a [relational data stream management system](https://en.wikipedia.org/wiki/Relational_data_stream_management_system) (RDSMS). It is particularly useful in handling [structured data](https://en.wikipedia.org/wiki/Data_model) where there are relations between different entities/variables of the data. SQL offers two main advantages over older read/write [APIs](https://en.wikipedia.org/wiki/API) like [ISAM](https://en.wikipedia.org/wiki/ISAM) or [VSAM](https://en.wikipedia.org/wiki/VSAM). First, it introduced the concept of accessing many records with one single command; and second, it eliminates the need to specify *how* to reach a record, e.g. with or without an [index](https://en.wikipedia.org/wiki/Database_index).

Originally based upon [relational algebra](https://en.wikipedia.org/wiki/Relational_algebra) and [tuple relational calculus](https://en.wikipedia.org/wiki/Tuple_relational_calculus), SQL consists of many types of statements,[[9]](https://en.wikipedia.org/wiki/SQL#cite_note-9) which may be informally classed as [sublanguages](https://en.wikipedia.org/wiki/Sublanguage), commonly: a [data query language](https://en.wikipedia.org/wiki/Data_query_language) (DQL),[[a]](https://en.wikipedia.org/wiki/SQL#cite_note-10) a [data definition language](https://en.wikipedia.org/wiki/Data_definition_language) (DDL),[[b]](https://en.wikipedia.org/wiki/SQL#cite_note-11) a [data control language](https://en.wikipedia.org/wiki/Data_control_language) (DCL), and a [data manipulation language](https://en.wikipedia.org/wiki/Data_manipulation_language)(DML).[[c]](https://en.wikipedia.org/wiki/SQL#cite_note-12)[[10]](https://en.wikipedia.org/wiki/SQL#cite_note-13) The scope of SQL includes data query, data manipulation (insert, update and delete), data definition ([schema](https://en.wikipedia.org/wiki/Database_schema) creation and modification), and data access control. Although SQL is often described as, and to a great extent is, a [declarative language](https://en.wikipedia.org/wiki/Declarative_programming) ([4GL](https://en.wikipedia.org/wiki/4GL)), it also includes [procedural](https://en.wikipedia.org/wiki/Procedural_programming) elements.

ASP.NET: **ASP.NET** is an [open-source](https://en.wikipedia.org/wiki/Open-source_software)[[2]](https://en.wikipedia.org/wiki/ASP.NET#cite_note-2) [server-side](https://en.wikipedia.org/wiki/Server-side_scripting) [web application framework](https://en.wikipedia.org/wiki/Web_application_framework) designed for [web development](https://en.wikipedia.org/wiki/Web_development) to produce [dynamic web pages](https://en.wikipedia.org/wiki/Dynamic_web_page) developed by [Microsoft](https://en.wikipedia.org/wiki/Microsoft) to allow [programmers](https://en.wikipedia.org/wiki/Programmer) to build dynamic [web sites](https://en.wikipedia.org/wiki/Web_site), [applications](https://en.wikipedia.org/wiki/Web_application) and [services](https://en.wikipedia.org/wiki/Web_service).

It was first released in January 2002 with version 1.0 of the [.NET Framework](https://en.wikipedia.org/wiki/.NET_Framework), and is the successor to Microsoft's [Active Server Pages](https://en.wikipedia.org/wiki/Active_Server_Pages) (ASP) technology. ASP.NET is built on the [Common Language Runtime](https://en.wikipedia.org/wiki/Common_Language_Runtime) (CLR), allowing programmers to write ASP.NET code using any supported [.NET language](https://en.wikipedia.org/wiki/List_of_CLI_languages). The ASP.NET [SOAP](https://en.wikipedia.org/wiki/SOAP)extension framework allows ASP.NET components to process SOAP messages.

ASP.NET's successor is [ASP.NET Core](https://en.wikipedia.org/wiki/ASP.NET_Core). It is a re-implementation of ASP.NET as a modular [web framework](https://en.wikipedia.org/wiki/Web_framework), together with other frameworks like [Entity Framework](https://en.wikipedia.org/wiki/Entity_Framework). The new framework uses the new open-source [.NET Compiler Platform](https://en.wikipedia.org/wiki/.NET_Compiler_Platform) (codename "Roslyn") and is [cross platform](https://en.wikipedia.org/wiki/Cross_platform). [ASP.NET MVC](https://en.wikipedia.org/wiki/ASP.NET_MVC), ASP.NET Web API, and ASP.NET Web Pages (a platform using only [Razor](https://en.wikipedia.org/wiki/ASP.NET_Razor) pages) have merged into a unified MVC 6.[[3]](https://en.wikipedia.org/wiki/ASP.NET#cite_note-asp.net-3)

Django: **Django** ([/ˈdʒæŋɡoʊ/](https://en.wikipedia.org/wiki/Help:IPA/English) [*JANG-goh*](https://en.wikipedia.org/wiki/Help:Pronunciation_respelling_key); stylised as **django**)[[4]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-4) is a [Python](https://en.wikipedia.org/wiki/Python_(programming_language))-based [free and open-source](https://en.wikipedia.org/wiki/Free_and_open-source_software) [web framework](https://en.wikipedia.org/wiki/Web_framework), which follows the model-template-view (MTV) [architectural pattern](https://en.wikipedia.org/wiki/Architectural_pattern_(computer_science)).[[5]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-faq-mvc-5)[[6]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-djangobook-mvc-6) It is maintained by the [Django Software Foundation](https://en.wikipedia.org/wiki/Django_Software_Foundation) (DSF), an independent organization established as a [501(c)(3)](https://en.wikipedia.org/wiki/501(c)(3)) non-profit.

Django's primary goal is to ease the creation of complex, database-driven websites. The framework emphasizes [reusability](https://en.wikipedia.org/wiki/Reusability) and "pluggability" of components, less code, low coupling, rapid development, and the principle of [don't repeat yourself](https://en.wikipedia.org/wiki/Don%27t_repeat_yourself).[[7]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-7) Python is used throughout, even for settings files and data models. Django also provides an optional administrative [create, read, update and delete](https://en.wikipedia.org/wiki/Create,_read,_update_and_delete) interface that is generated dynamically through [introspection](https://en.wikipedia.org/wiki/Type_introspection)and configured via admin models.

Some well-known sites that use Django include the [Public Broadcasting Service](https://en.wikipedia.org/wiki/Public_Broadcasting_Service),[[8]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-20sites-8) [Instagram](https://en.wikipedia.org/wiki/Instagram),[[9]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-9) [Mozilla](https://en.wikipedia.org/wiki/Mozilla_Foundation),[[10]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-10) [*The Washington Times*](https://en.wikipedia.org/wiki/The_Washington_Times),[[11]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-11) [Disqus](https://en.wikipedia.org/wiki/Disqus),[[12]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-12)[Bitbucket](https://en.wikipedia.org/wiki/Bitbucket),[[13]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-13) and [Nextdoor](https://en.wikipedia.org/wiki/Nextdoor).[[14]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-14) It was used on [Pinterest](https://en.wikipedia.org/wiki/Pinterest),[[15]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-15) but later the site moved to a framework built over [Flask](https://en.wikipedia.org/wiki/Flask_(web_framework)).[[16]](https://en.wikipedia.org/wiki/Django_(web_framework)#cite_note-16)

Rettofit: [Retrofit](http://square.github.io/retrofit/) is a type-safe REST client for Android, Java and Kotlin developed by Square. The library provides a powerful framework for authenticating and interacting with APIs and sending network requests with [OkHttp](http://square.github.io/okhttp/). See [this guide](https://guides.codepath.com/android/Using-OkHttp) to understand how OkHttp works.

This library makes downloading JSON or XML data from a web API fairly straightforward. Once the data is downloaded then it is parsed into a Plain Old Java Object (POJO) which must be defined for each "resource" in the response.